

MESSAGE DISPLAY



← 32 →

Message number 32

TRASH Move

Date: 1/22/2003 21:02:31 -0500

From: Martin Friedman <friedman@libertynet.org>

To: Suzanne Zammit <suzannez@stargate.relcomm.net>

Subject: Re: Questions Atlantic City Public Schools Form 470 Internal Connections
Suzanne,All
headers

I received the FedEx today.

The District has not supplied us with the level of detail for which you are asking. As such, we are asking vendors to take a walk-through and provide the District with a "best solution."

I understand that John Holt has been contacted by RelComm and that you are participating in this Friday's walk-through. I also believe that he emailed RelComm the same information packet as was provided to all other vendors.

Yours,

M

on 1/22/03 12:58 PM, Suzanne Zammit at suzannez@mail.relcomm.net wrote:

> Dear Mr. Friedman:

>

> I apologize for the garbled text in my last email, I have resaved the
> list of questions as a Word document so you should now be able to read
> the attachment. I have also sent this document to you via FedEx, which
> you should receive today. We will need to have the answers to these
> questions in writing and as you have instructed in your email, we will
> contact John Holt to set up a walk through before sending our bid.

>

> Sincerely,
> Suzanne Zammit
> RelComm Inc.

>

Martin Friedman, President
ALEMAR Consulting
friedman@libertynet.org
www.alemar.net

"We're all prisoners here, of our own device."

"At every crossing on the road that leads to the future, each progressive
spirit is opposed by a thousand appointed to guard the gates of the past."
-Maeterlinck

RelComm Inc.

The Reliable Communications Company

January 21, 2003

Martin Friedman
442 Lyndhurst Drive
Broomall, PA 19008-4146

Subject: Re; Atlantic City Public School District Form 470 Internal Connections

Dear Mr. Friedman:

We will be responding online to the bid for internal connections for the Atlantic City Public School District. We need the answers to the questions below no later than 7 days from the date of this letter. We will also need to know when the bids will be opened. Thank you in advance for your cooperation.

Is there a master design of the network?
Are you requesting a network design service?
We would like to request more detailed information on the services requested.
Will you be requesting additional proposals for non-eligible items and services?

LAN Maintenance Agreement all eligible items, 10 bldgs.

What is the type of network (more details, please)?
What type of workstations at each location (Mac, PC, UNIX,...)?
What type of servers (Mac, PC, UNIX,...)?
What is the type of the network equipment (hubs, switches, routes, provide models if possible)?
How are the buildings connected with each other?
What kind of maintenance is required (please list the services)?
Which of the eligible items are applicable to your network?

Wire & Cable Maintenance all eligible items, 10 bldgs.

Please provide type of cabling required.
How many cable runs are required?
Please provide the building maps with marked socket locations and the location of the network hub.
Which of the eligible items are applicable to this part of the request?

408 Bloomfield Drive, Suite 3 ■ West Berlin, NJ 08091
Phone 856-809-1056 ■ Fax 856-809-1058

Telephone System Maintenance existing eligible equipment

What telephone equipment is currently installed?

Please present the telephone system infrastructure.

What type of maintenance you are looking for, just the extended warranty, equipment reconfiguration and periodical checkups of functionality, system administration?

Extended Warranties existing and new eligible equipment

Please present the equipment list you are requesting extended warranties for (types, makes, models).

Project Management all Y6 eligible projects

Please list the projects, you are looking to implement.

Web/email Server 25

Please provide detailed specification on the hardware, software and locations of the servers.

- a. Number, type and speed of CPUs (capability).
- b. Amount, type and breakdown (per unit) of memory.
- c. Amount of disk space and the type of the disk storage.
- d. Number and type of the network adapters.
- e. Any extra devices (cd-roms, tape drives, floppy ...)
- f. Requirements to video.
- g. Type of the operating system.
- h. Type of the e-mail and web software to be installed.
- i. Number of clients served by each server.
- j. Type of firewall
- k. Reason for amount of servers

Please provide the base model if possible.

Is the base model the requested one, or does it represent the base set of features?

DHCP Server 12

We need the same hardware and software information as above.

DNS Server 12

We need the same hardware and software information as above.

Back Up systems 12

Does it mean separate tape type devices, UPSs or are they just spare servers?

If these are tape systems, please provide specification on these devices or at least base model and capacity.

VOIP System w/video all eligible items

Please explain your definition of VOIP system. Is it software running on the existing system? Is it a separate hardware system or infrastructure of systems? If so please provide the base model or detailed specifications.

Video Equipment EMMI, MCU, enhancer, MptCU, amplifiers, VCM

What will be the purpose of this equipment? Please provide the base model or detailed specification of the requested equipment.

Wireless LAN 20 areas, 803.11b and 802.11a compliant

What type of devices should be used as access points (bridge, router, or firewall)? Should the access points be capable of both protocols, or the combination can be capable of both and not separate devices? If available, please provide the base model.

Internal cabling 980 drops, CAT 6

Please provide the building diagram(s) with marked locations.
What type of cabling should be used?

Network Electronics LAN extension & enhancement

Please specify the types and tech. specifications of the equipment requested.

Network OS Windows's 2000 server (60) & clients (7500)

What type of licensing is requested?
Please provide the breakdown by types and quantities.

Again, thank you for your cooperation and responses should be directed to Konstantin Reznitsky at rkv@relcomm.net or 408 Bloomfield Drive, Suite 3, West Berlin, NJ 08091 phone 856-809-1056.

Sincerely,

Konstantin Reznitsky
Director of Technology
RelComm Inc.

Exhibit F

Exhibit G

MESSAGE DISPLAY

Message number 42



◀ 42 ▶

TRASH

Move

Date: 1/21/2003 20:06:08 -0500

From: Martin Friedman <friedman@libertynet.org>

To: Suzanne Zammit <suzannez@stargate.relcomm.net>

CC: rkv@relcomm.net, John Holt <bjholtjr@hotmail.com>

Subject: Re: Atlantic City Public Schools Form 470 Applications

Suzanne,

All
headers

As you can see below, your questions arrived as a jumble of characters.

We have limited the bids on internal connections to vendors who have completed a walk-through of the sites in question. One walk-through has already taken place and, I believe, that a second walk-through is being scheduled for this week. Please contact John Holt at 215-588-4944 to be placed on the tour.

In addition, we are accepting only sealed bids. I will be more than happy to entertain any questions that you may have online but I must receive the bid by January 31, 2003 at 4P.

Yours,

M

on 1/21/03 3:31 PM, Suzanne Zammit at suzannez@mail.relcomm.net wrote:

> Dear Mr. Friedman:

>

> Attached you will find a list of questions regarding the 470
> applications for Internal Connections for Atlantic City Public
> Schools. We will be responding to the bid online and we will need to
> have the questions answered within the time frame stated on the
> letter. Please see the attached document.

>

> Any questions that you have should be directed to Konstantin Reznitsky
> at rkv@relcomm.net.

>

> Sincerely,
> Suzanne Zammit
> RelComm Inc.
> Phone 856-809-1056
> Fax 856-809-1058

>

>

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> 020b06040202020204}Arial;}
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> 05000000000000000000}Wingdings;}{\f27\swiss\charset0\prq2{*\panose
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REL1279

Exhibit H

VENDORS' LIST

Jan 4 2003

Company

Address

Name _____

MICRO Technology Group, 3114 Old Rodgers Road
Bristol, PA 19007

~~2017~~ Rich Linkhorst

Wireless Technology 1790 Mo 70 E.
Sherry Hill N.S.

MICHAEL ROSIN

Groff, Mary

20 (206) 5325

Surf Beach

Joe Brown 2658 N.W. Barclay

Conte

Exhibit I

my-pp
file
Auditors



Fax Transmission

Date:

7/8/03

To:

Elijah Phonpkin
Atlantic City SD

Fax Number:

(609) 347-1549

From:

Rich Linkhorst

~~MICRO Technology Group~~

Our Phone:

(610) 777-8650

Our Fax:

(610) 777-8545

Number of pages including this cover page: 13

This is part 1 of 2 of the total fax transmission.

Please call if you experience any transmission problems.

03059

Atlantic City BE-Admin

1809 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Group, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Group Erate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

Erate Eligible File Servers

DHCP Server

Qty.	Order Number	Description	Unit Price	Total Price
12	257918-001	Compaq ProLiant ML370 G3 Xeon-2.4GHz, 512 MB, 48xCD, 10/100/1000 Rack	\$ 2,251.00	\$ 27,012.00
12	257913-B21	Compaq Xeon-2.4 GHz Processor Option kit for ML370	\$ 538.00	\$ 6,456.00
12	300678-B21	Compaq 512 MB PC2100 DDR (2x256MB) Memory	\$ 305.00	\$ 3,660.00
24	183122-B22	Compaq 16 GB 15K Universal Wide SCSI U3 1 IN pluggable hard drive	\$ 323.00	\$ 7,752.00
12	225336-B21	Compaq Smart Array 532 Controller	\$ 538.00	\$ 6,456.00
12	225075-001	Compaq Hot plug Redundant Power supply	\$ 193.00	\$ 2,316.00
12	225073-B21	Compaq Hot plug Redundant Fan	\$ 136.00	\$ 1,740.00
This unit ships with a 3 Year On-site Warranty with Next Business Day Service			Sub Total	\$ 53,826.00

DNS Server

Qty.	Order Number	Description	Unit Price	Total Price
12	257918-001	Compaq ProLiant ML370 G3 Xeon-2.4GHz, 512 MB, 48xCD, 10/100/1000 Rack	\$ 2,251.00	\$ 27,012.00
12	257913-B21	Compaq Xeon-2.4 GHz Processor Option kit for ML370	\$ 538.00	\$ 6,456.00
12	300678-B21	Compaq 512 MB PC2100 DDR (2x256MB) Memory	\$ 1,213.00	\$ 14,556.00
24	183122-B22	Compaq 16 GB 15K Universal Wide SCSI U3 1 IN pluggable hard drive	\$ 323.00	\$ 7,752.00
12	225336-B21	Compaq Smart Array 532 Controller	\$ 538.00	\$ 6,456.00
12	225075-001	Compaq Hot plug Redundant Power supply	\$ 193.00	\$ 2,316.00
12	225073-B21	Compaq Hot plug Redundant Fan	\$ 136.00	\$ 1,740.00
This unit ships with a 3 Year On-site Warranty with Next Business Day Service			Sub Total	\$ 64,722.00

Web/Email Server

Qty.	Order Number	Description	Unit Price	Total Price
25	257918-001	Compaq ProLiant ML370 G3 Xeon-2.4GHz, 512 MB, 48xCD, 10/100/1000 Rack	\$ 2,251.00	\$ 56,275.00
25	257913-B21	Compaq Xeon-2.4 GHz Processor Option kit for ML370	\$ 538.00	\$ 13,450.00
50	300678-B21	Compaq 512 MB PC2100 DDR (2x256MB) Memory	\$ 1,213.00	\$ 60,650.00
25	225336-B21	Compaq 16 GB 15K Universal Wide SCSI U3 1 IN pluggable hard drive	\$ 502.00	\$ 12,550.00
25	225336-B21	Compaq Smart Array 532 Controller	\$ 538.00	\$ 13,450.00
25	244942-B21	Compaq 100/100 PCI-X Gigabit Server Adapter	\$ 183.00	\$ 4,575.00
25	225075-001	Compaq Hot plug Redundant Power supply	\$ 193.00	\$ 4,825.00
25	225073-B21	Compaq Hot plug Redundant Fan	\$ 136.00	\$ 1,740.00
This unit ships with a 3 Year On-site Warranty with Next Business Day Service			Sub Total	\$ 191,049.00

Server Rack

Qty.	Order Number	Description	Unit Price	Total Price
12	016401	APC NetShelter VK 42 U Rack	\$ 1,495.00	\$ 17,940.00
12	016017	APC 15IN LCD monitor/keyboard drawer with full keyboard/trackball TU	\$ 1,896.00	\$ 22,776.00

Lower cost option - instead of the LCD monitor kit you can purchase a 15" CRT and rack shelf. These prices are:

Compaq 15" monitor # 578042 - \$137.00

APC monitor shelf # 052507 - \$44.00

APC keyboard # 011172 - \$148.00 (17in keyboard with integral number pad/touchpad)

APC keyboard drawer # 011307 - \$135.00

12	044979	APC rack fan kit	\$ 308.00	\$ 3,696.00
12	051236	Beckhoff R-series IMA switch	\$ 286.00	\$ 3,432.00
48	017108	Beckhoff CMM cable set	\$ 25.00	\$ 1,200.00

Uninterruptible Power Supply (UPS) - Server Rack - 3000W, 3000W and (page back up)

12	073102	Amer. Power Conv. Smart-UPS 3000 rack mount	\$ 1,531.00	\$ 18,372.00
12	073103	Amer. Power Conv. Smart-UPS Battery Pack 48 V	\$ 493.00	\$ 5,916.00
Please note: This requires a Twist lock 120 V 30 amp plug			Sub Total	\$ 79,332.00

Server 2000 Advanced Server Licensing

Qty.	Order Number	Description	Unit Price	Total Price
49	522459	Windows Server 2000, Advanced Server	\$ 492.00	\$ 24,108.00
7500	522451	Client License (if needed)	\$ 6.46	\$ 48,450.00
Note: the license price is based on a volume purchase. If you order less licenses than listed above, the prices above may increase slightly.				
72	430205	Media for Windows Server 2000 Advanced Server	\$ 28.00	\$ 336.00
			Sub Total	\$ 72,894.00

Back Up Unit and Back Up Software

Qty.	Order Number	Description	Unit Price	Total Price
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33000

12	192166-B25	Compaq StorageWorks SOLT 110/220 Tape Drive, carbon	\$	3,641.00	\$	49,692.00
		Note, school will need to purchase tape cartridges. Tape cartridges are not E-rate eligible.				
		3 year Parts warranty.				
12	491224	Ventis Back Up Exec for Advanced Server with 1 year 24x7 maintenance	\$	745.00	\$	8,940.00
49	491309	Server Agent with 1 year 24x7 maintenance	\$	145.00	\$	7,105.00
12	491264	Open File Agent with 1 year 24x7 maintenance	\$	433.00	\$	5,196.00
12	491269	Agent for Exchange with 1 year 24x7 maintenance	\$	495.00	\$	5,940.00
12	495335	Media Kit	\$	36.00	\$	432.00
			Sub Total		\$ 71,905.00	

Installation

Complete installation and configuration of the 49 E-rate servers
 MTG will provide a formal Statement of Work before installation is scheduled
 based on district requirements determined in our Engineering study.
 Server training for 10 buildings
 Staff will be trained on the hardware, software, and working procedures
 for the DNS, DHCP, and Web/Email servers.

\$ 96,000.00

\$ 20,000.00

Purchase Orders May be Sent to:
 MICRO Technology Group
 311A Old Rodgers Road
 Bristol, PA 19007
 FAX 817-529-9689

MICRO Technology Group E-rate SPIN 143008940

Atlantic City BE-Admin
1809 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Group, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Group Estate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

Erate Eligible Network Electronics for the Elementary Schools

Core Fiber Switch for MLK

Qty.	Order Number	Description	Unit Price	Total Price
2	WS-C6505-1300-AC	Catalyst 6505 Chassis w/1300W AC Power Supply	\$ 9,050.00	\$ 18,100.00
2	WS-C6505-1300W	Catalyst 6505 1300W Second AC Power Supply	\$ 2,585.00	\$ 5,170.00
6	CAB-77AC-15	AC Power Cord North America, 15A	\$ -	\$ -
1	WS-C6548-24	Catalyst 6500 48-port 10/100, RJ-45, x-bar	\$ 11,650.00	\$ 11,650.00
2	WS-C6548-24	Catalyst 6500 Supervisor Flash Image, Release 6.1	\$ -	\$ -
2	WS-X6651A-MSFC2	Catalyst 6500 Supervisor Engine 1-A, 2GE, plus MSFC & PFC	\$ 19,400.00	\$ 38,800.00
2	WS-X6651A-MSFC2-2	Catalyst 6500 Redundant Supervisor Engine 2GE, w/MSFC and PFC	\$ -	\$ -
0	MEM-M56L-128MB	Catalyst 6500 MSFC Memory, 128MB DRAM Option	\$ -	\$ -
2	SCBMSFC-12.0-72E-21	Catalyst 6500 MSFC IOS-Desktop	\$ -	\$ -
4	WS-X6408A-GBC	Catalyst 6500 8-port Gigabit Ethernet Module (Req. GBCs)	\$ 6,470.00	\$ 25,880.00
48	WS-G5348-24	1000BASE-LX/LH 1km 10/100/1000 GBC (singlemode or multimode)	\$ 645.00	\$ 30,960.00
1	cat-9300-plg-17	Package SmartNet 8-SyncB0 - Category 17	\$ 5,525.00	\$ 5,525.00
1		Installation	\$ -	\$ 12,000.00
Sub Total				\$148,085

Core Switches for the Elementary Schools

Qty.	Order Number	Description	Unit Price	Total Price
10	WS-C6505-1300	Catalyst 6505 Chassis w/ 1300W AC Power Supply	\$ 6,467.00	\$ 64,670.00
10	WS-C6505-1300W	Catalyst 6505 Supervisor Engine 2, 2GE, plus MSFC-2 & PFC-2	\$ 14,235.00	\$ 142,350.00
10	WS-C6505-1300	Catalyst 6505 1300W AC Power Supply, Spare	\$ 2,585.00	\$ 25,850.00
10	cat-9300-plg-16	Package SmartNet 8-SyncB0 - Category 16	\$ 4,210.00	\$ 42,100.00
20	WS-C6548-24	Catalyst 6500 48-port 10/100, RJ-45, x-bar	\$ 11,650.00	\$ 233,000.00
10	WS-C6505-1300	Catalyst 6500 Switch Fabric Module	\$ 4,850.00	\$ 48,500.00
10	WS-C6505-1300	Catalyst 6500 8-port GE, Enhanced QoS	\$ 6,470.00	\$ 64,700.00
10	073102	Antec Power Corp. Smart-UPS 3000 rack mount	\$ 1,531.00	\$ 15,310.00
10	073103	Please note: This requires a Twist lock 120V 30 amp plug. School is required to provide for the installation of this plug.	\$ 493.00	\$ 4,930.00
10	073103	Antec Power Corp. Smart-UPS Battery Pack 48 V	\$ -	\$ 30,000.00
Sub Total				\$671,410

Network Edge Switches for the Elementary Schools

Qty.	Order Number	Description	Unit Price	Total Price
80	2950g-48-port	Catalyst 2950, 48 10/100 with 2 GERC slots, Enhanced Image	\$ 2,925.00	\$ 234,000.00
80	connect-plg-6	Also Package SmartNet 8-SyncB0 - Category 6	\$ 450.00	\$ 36,000.00
80	ws-c2350-24	HighSpeed Stacking GBC and 50cm cable	\$ 165.00	\$ 13,200.00
40	ws-g5348-24	1000BASE-SX Short Wavelength GBC	\$ 325.00	\$ 13,000.00
40	119-72	Antec Power Corp. Smart-UPS 700 Rack Mount	\$ 391.00	\$ 12,900.00
1		Installation	\$ -	\$ 30,000.00
Sub Total				\$326,100

Gigabit Server Connectivity (for Year 6 E-rate eligible servers)

Qty.	Order Number	Description	Unit Price	Total Price
48	2501-12	Cisco WS-C2501-12GBC	\$ 256.00	\$ 12,288.00
Sub Total				\$12,288

Network Documentation

Network Documentation and diagrams	\$5,000
Documentation will be provided in paper and electronic form.	

Network Training

Staff training on Core network electronics	\$5,000
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Network Connection to the Modular Units

We understand modular classrooms are used at Richmond, Hickman Complex, Chobee, and Venice Park. We can provide a wireless connection from the school buildings to the modular units. (The wiring proposed can cover any wiring within the modular rooms. The wireless connection can provide network access to the modulators.)

Qty.	Description	Unit Price	Total Price
4	Wireless Access Point	\$ 1,550.00	\$ 6,200.00
4	Wireless Bridge	\$ 1,550.00	\$ 6,200.00
4	Antennas and Mounts for AP and WB	\$ 200.00	\$ 800.00
4	Installation	\$ 1,750.00	\$ 7,000.00
1	Contingency Fee	\$ 2,500.00	\$ 2,500.00
Sub Total			\$22,700.00

Note: Contingency fees are E-rate eligible. Due to the scope of work, we highly recommend submitting for a contingency fee. The contingency fee will only be used for unforeseen circumstances and are agreed upon by the school and MTG.

Atlantic City BE-Admin

1809 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Groups, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Groups Estate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

Estate Eligible Wireless LAN Access

Qty.	Order Number	Description	Unit Price	Total Price
20	654628	Cisco Aironet 1200 Access Point 802.11b	\$ 655.00	\$ 13,100.00
20	563104	Cisco 802.11a Wireless	\$ 364.00	\$ 7,280.00
Note, if you use both a and b simultaneously, you will need AC power near the Access Point				
40	410797	Cisco Aironet Antenna	\$ 14.00	\$ 560.00
20	558643	Cisco 1200 platform 110-220 Power supply	\$ 74.00	\$ 1,480.00
20	559058	Cisco SmartNET Maintenance 8x5xNBD, One Year CON-SNT-PKG1	\$ 67.50	\$ 1,350.00
20		Wire run from wiring closet to location of the Access Point	\$ 190.00	\$ 3,800.00
1		Complete installation of the 20 Access Point		\$ 10,000.00
Sub Total				\$ 37,570.00



Fax Transmission

Date: 7/8/03

To: Elijah Phonpkin
Atlantic City SD

Fax Number: (609) 347-1549

From: Rich Linkhorst
MICRO Technology Groupe

Our Phone: (610) 777-8650

Our Fax: (610) 777-8545

Number of pages including this cover page: 6

This is part 2 of 2 of the total fax transmission.

Please call if you experience any transmission problems.

January 30, 2003

Mr. Martin Friedman
442 Lyndhurst Drive
Broomall, PA 19008

Dear Mr. Friedman,

MICRO Technology Groupe, Inc. (MTG) is pleased to submit this comprehensive proposal for the Atlantic City Board of Education Year 6 E-rate application.

We have proposed a solution for internal connections. This includes: cabling, network electronics, servers, and video. It also includes installation costs, maintenance agreements, and engineering costs.

We have used hardware from Cisco Systems and Compaq (HP) for the servers and network electronics. As you are aware, Cisco and Compaq are widely recognized as leaders in the technology industry.

We have configured the servers as per the bid specifications.

We feel the wiring in many of the schools should be replaced. We are not willing to provide any LAN Enhancements using the existing wiring in those schools. We have provided prices to rewire (or add wiring) to the buildings. There is a per drop price for a cable run which will allow you to make any add/deletes to the number of runs that we propose.

We understand the district has two-pair fiber optic cable from each school building to the Dr. Martin Luther King School Complex. We propose to use this fiber as the districts' Wide Area Network links. We propose two Cisco Catalyst 6509 switches to provide redundant WAN connection.

Further, we propose Cisco Catalyst 6506 switches in each school building with Cisco Catalyst 2950 stackable switches in the various network closets.

Please be aware there are a few issues the district must address. They include providing adequate environmental conditions in the wiring closets and providing proper electrical power in the buildings. We do not believe these services are eligible under Year 6 of the E-rate program. MTG can provide the names of companies who offer such services.

MTG has been providing technology solutions to schools and businesses since 1989. We offer the highest quality of support on both the Windows and Macintosh platforms. We understand the district uses a mix of Windows and Mac OS computers. We believe we can partner with the district to become a reliable and valued Systems Integrator.

We would appreciate to speak with you and the district regarding our complete proposal. I can be reached at (877) 366-3684 ext. 385. Please be aware, we recently moved our company headquarters to 311A Old Rodgers Road, Bristol, PA 19007. We can be reached on the web at www.mtgroupe.com.

Thank you for your time and courtesy.

Regards,

Richard D. Linkhorst
Account Executive

Overview

Micro Technology Groupe participated in a site visit to the district for the purpose of providing a proposal for the Board of Educations' Form 470 E-rate application.

Based on that visit, we recommend the district address several areas.

1) Wiring Infrastructure:- The foundation of your network is the wiring infrastructure. It is an extremely critical component of your network. Without a properly designed and installed cable plant, a network will consistently malfunction.

The wiring in the school buildings (with the possible exception of the High School, Uptown Complex, MLK, and Chelsea Heights) consists of classrooms that have a single category 5 cable that originates in a wiring closet. That cable is terminated on a patch panel in an enclosed cabinet near the ceiling of the room. From that classroom patch panel there are approximately seven category 5 cables that are terminated into RJ 45 boxes near the location of the computers.

In addition, there are computer labs that have wires that are not properly terminated. They should terminate into an RJ 45 patch panel in a secure wiring closet. The labs have cables runs that are directly plugged into two switches that sit on the perimeter of the room. The switches (and corresponding cable runs) are not secured within a wiring cabinet. Such a cable installation is not acceptable and does not meet industry standards for cabling.

This is not an efficient network infrastructure. All of the elementary schools should have a cable plant similar to the High School.

All cable drops in the classrooms should be terminated in a centrally located wiring closet. There should be one wiring closet identified as an "Main Distribution Frame," or MDF. The MDF should be connected to the other wiring closets, or "Intermediate Distribution Frames" (or IDF) with a fiber optic cable.

In addition, all cable patch panels should be housed in lockable wiring cabinets. There are open frame, unsecured, wiring racks in the elementary schools. The wire rack in one school is placed underneath a pipe. All network and wiring components should be placed with no possible interference with any moisture, falling particles or electric.

Our recommendation is to replace the existing wiring in six elementary schools with a minimum of 250 new cables that follow the requirements listed above. (These schools are New Jersey, Ohio, Indiana, Richmond, Brighton Avenue, and Texas) Since there appears to be some adequate cabling in Uptown Complex, we recommend adding 100 properly terminated copper cables. This will allow us to rewire the computer lab, and library, among other locations. Venice Park is a small building. We recommend 75 network cables for that building.

Further, since we understand that MLK and Chelsea Heights are upgraded, we recommend 100 Category 5e drops for those buildings.

(We have provided per drop prices in our price sheet. You can add/delete the number of Category 5e cables based on our per drop count.)

Please note, these new drops for MLK, Chelsea Heights, the High School, and Uptown can work with a Voice over IP (VoIP) telephone system. We understand the current telephone wiring is Category 3. You need Category 5e cabling for VoIP.

From our observation, the High School appears to be properly cabled. Without testing all of the cables (which is a fee-based service) we cannot guarantee all cables are certified Category 5 or 5e cables. We recommend subcontracting for a Wire Maintenance Agreement for the High School in your E-rate Form 471. This will help cover any unforeseen circumstances with the high school.

Please note, we observed instances of cables clearly not meeting industry standards for Category 5 cabling in the elementary schools.

Category 5e cabling is an approved service in Year 6 of the E-rate program.

2) **Network electronics** - The next step after your cable plant is the installation of network electronics.

Our recommendation is to replace the existing hubs and switches with chassis-based switches (with routing capability) for the Network Core and stackable 10/100 switches at the Network Edge.

All of the network electronics should be placed in the several wiring closets (or distribution frames) that were created by the proper cable installation. These switches should run at 10/100 Megabits per second. The switches in the wiring closets should be stacked with the head end switch connected to the fiber optic cable going to the MDF. This connection speed should be 1 Gigabit per second (1000 Megabits.)

Currently, each elementary classroom has a 10 MB hub. By consolidating your network electronics in the wiring closets, you will make it easier to service the switches. In addition, you will minimize interruptions in the classrooms. Further, by consolidating the switches will enable you to plug the switches into properly-sized UPS units (Uninterruptible power supplies). Using UPS units will reduce network problems.

In addition, by deploying 10/100 Mb switches with a 1 GB backbone, network performance will improve. Many of the current technologies and certainly future technologies require such network bandwidth.

Switches, associated installation costs, and maintenance contracts on the hardware are approved products in Year 6 of the E-rate program.

We have submitted a proposal for upgrading the network electronics in all of the buildings.

Please note, we recommend the district receive a network diagram "as built" immediately after the cable installation is complete and the network electronics are in place. This will prove to be a valuable asset for supporting your network and providing for future growth.

3) **File Server Integration** - We understand the district uses a mix of Microsoft Windows-based PCs and Apple Macintosh computers. We have implemented and support numerous school districts with a similar mix of equipment. We find that with a properly designed and installed network, the two platforms can co-exist.

We understand the district is running Unix-based Linux servers, Microsoft NT servers and Apple servers.

Our recommendation is to use Microsoft Server 2000 Advanced Server Edition for the primary server functions. In addition, the Apple servers can still be used to provide auxiliary services for the Macintosh computers.

Your Linux servers run on Aspen Systems hardware. We are unfamiliar with Aspen Systems. We are uncertain as to whether the Aspen hardware will support running Microsoft Server 2000 Advanced Server Edition. We recommend making a transition from the Linux platform to Server 2000. MTG can provide support with this transition. This may or may not involve new server hardware.

A further evaluation of the Apple servers will be needed to determine whether they need to be upgraded. We have extensive experience in the Macintosh environment. We can evaluate your Apple servers to determine what upgrades, if any, would best suit the districts' needs.

We have submitted a proposal for 49 new Microsoft Server 2000 Advanced Servers for DNS, DHCP, Email and Web. Deploying these servers is a good first step to a stable network environment. These servers are approved products in Year 6 of the E-rate program.

Upgrading or replacing your existing servers are not approved products or services in Year 6 of the E-rate program (unless they are a DNS, DHCP, Terminal, or Email server). We can provide the proper consultation for the future use of these servers.

4) **Environmental concerns** - During our site visits, we noticed wiring closets that lack the proper air conditions. These closets contain temperature sensitive equipment. Since it is very likely these rooms will be used even if the schools are re-wired, we highly recommend that the district contract a vendor to provide

proper air solutions. We can provide the names of companies that provide this service. We further recommend installing the proper air equipment where it is deemed necessary.

5) **Electrical power** - We also recommend having a thorough evaluation of all electrical requirements for the district. We can provide names of companies that provide such service. MTG requires that every MDF and IOF have the proper power before we begin installing any network equipment. It may be possible that your maintenance department can provide this service.

6) **Network support**. We recommend the district contract a reliable Systems Integration company - certified in Cisco, Microsoft, Apple, HP and Compaq - to provide support to the school. This support should work in harmony with an information technology staff employed by the district. We understand the district has technology personnel in place, therefore, we recommend purchasing a Network Maintenance Agreement. Network Maintenance Agreements are an eligible Year 6 service. These maintenance agreements, however, may only cover products that are eligible under Year 6. This includes routers, switches and eligible servers. In addition, we recommend the district purchases a Maintenance Agreement that covers non-Year 6 eligible products such as non-eligible servers, computers, printers, and application software.

In addition, we recommend purchasing a Network Management software program. This will allow you to monitor your network electronics. A network management program is not an eligible E-rate product.

Using this overview, we propose the following for the Atlantic City Board of Education.

Step 1 - Submit for a Year 6 eligible Engineer/Design Study. This study will focus on what equipment is in place and what is the best way to utilize that equipment in conjunction with the products to be purchased under E-rate Year 6. This will allow you to have a reliable plan to address current network problems and how best to begin solving those problems.

In addition, we can determine what space will be needed for your wiring closets (MDFs and IOFs. - this will allow you to perform Steps 2 and 3 below.)

Cost - \$25,000.00

Step 2 - Purchase an environmental study. This is not E-rate eligible. MTG does not provide this service.

Cost - To be determined

Step 3 - Purchase an electrical study. This is not E-rate eligible. MTG does not provide this service.

Cost - To be determined

Step 4 - Implement recommendations made in the environmental and electrical studies.

Cost - To be determined

Step 5 - If the school district receives E-rate funding, begin the installation of the E-rate eligible and non-eligible products. Your first step will be the cable installation, followed by the installation of the network electronics. After your switches are in place you should have your file servers installed. The final step is configuring your workstations to properly access the new network resources.

Cost - For E-rate eligible and non-eligible products and services, please refer to the price sheets included with this document

(Please note, we understand the district is considering submitting for Project Management for Year 6 of E-rate. We highly recommend the district purchase a Project Management contract through the E-rate program. We will be happy to work with the Project Manager.)

Step 6 - Analyze each workstation for network compatibility and implement those upgrades (if required). This is not covered in the E-rate program.

Cost - To be determined

Step 7 - Purchase the E-rate eligible and non-eligible training courses for the new servers and network electronics

Cost - For E-rate eligible and non-eligible training, please refer to the price sheets included with this document.

Step 8 - If the school district receives E-rate funding, purchase all network maintenance agreements listed on our price sheets.

Cost - For E-rate eligible and non-eligible maintenance agreements, please refer to the price sheets included with this document.

Step 9 - Begin needs analysis for Year 7 of the E-rate program.

Cost - We recommend working with your current E-rate consultants to prepare for Year 7. That cost is to be determined by your consultants.

Atlantic City BE-Admin
1808 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Groups, Inc.
311 A Rodgers Road
Bristol, PA 19007-2015

1/27/03

MICRO Technology Groups E-rate SPN 143008940

All hardware or software will be purchased as listed or "newer"

E-rate Maintenance Agreements for the Elementary Schools

10	Year Maintenance Agreement for All Category 5e voice and data wiring completed in the last E-rate project.	\$	5,000.00	\$	50,000.00
70	E-rate Maintenance Agreement for All Year 6 eligible Network servers, switches, Wireless access points, UPS units, back up drives. One E-rate Maintenance Agreement is for 380 hours of on-site support. Lowest Cost option: 250 hours of on-site support for \$26,250 150 hours of on-site support for \$15,750	\$	40,000.00	\$	400,000.00

Maintenance Agreement for Atlantic City Board of Education

Client: Atlantic City BE-Admin
1808 Pacific Avenue
Atlantic City, NJ 08401

Type of Support: Outsider Agreement

Personnel: Systems Engineer for Maintenance of E-rate eligible servers, back up drives, network electronics, and UPS units.

Start/Length of Agreement: July 1, 2003 to June 30, 2004

Cost of Support: \$400,000 per school. 10 schools will be covered for a total price of \$400,000.00

Atlantic City BOE will be provided with a Systems Engineer for on-site maintenance of Servers, switches and other E-rate eligible products during the 2003-2004 school year. Maintenance will be performed on a Time and Materials basis on products only covered by the E-rate program. This is a Statement of Work. The \$400,000 will be paid upon receipt of the school Purchase Order.

E-rate Information: This contract is contingent upon Atlantic City BOE getting E-rate funding at a 90% discount rate. MTG's E-rate SPN is 143008940

Billing: Please send order to: MICRO Technology Groups, 311 A Old Rodgers Road, Bristol, PA 19020. Our fax number is (toll free) 1-877-329-9684. MTG is responsible for tracking the engineers' time/materials. We will provide the school with a monthly summary of the time and materials used by our engineers.

Contact: MTG has a toll free number that the district will use when support is needed.

Total number of support hours: 380 hours per school. 10 schools will be covered for a total of 3,800 hours.

Equipment to be supported:

- 40 Servers - Compaq ProLiant Workgroup servers for DNS, DHCP and Email.
- 10 Cisco 6508 Chassis based Switch.
- 80 Cisco Catalyst 2950-48 port switches.
- 10 Compaq back up drive and back up software.
- 40 APC UPS units.

E-rate Application and PO Information

MICRO Technology Groups
311 A Rodgers Road
Bristol, PA 19007-2015
MTG E-rate SPN 143008940
CAX: 877-329-9684

INTG

FAX NO. : 6107778545

Jul. 08 2003 09:39AM P7

Atlantic City BE-Admin

1803 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Groups, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Groups Estate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

LAN Cabling

1	inmate	Installation of 1850 Cat5e cables	\$	375,200.00	\$	375,200.00
1875	22672	3' patch cable Cat 5e	\$	3.75	\$	7,031.25
1875	22684	7' patch cable Cat 5e	\$	4.75	\$	8,906.25
1		Enclosures	\$	67,200.00	\$	67,200.00
50		Single mode fiber patch cable	\$	100.00	\$	5,000.00
50		Multi-mode fiber patch cable	\$	75.00	\$	3,750.00
Sub Total					\$	467,087.50

Note, please refer to the Cabling Scope of work with this proposal.

Note, the pricing listed above does not include removal/disposal of any existing wiring or testing/certification of existing wiring. Those services can be provided for \$75.00 per hour.

We estimate it would take 40 hours per building for removal and disposal of existing wiring.

INTG

FAX NO. :6107778545

Jul. 08 2003 09:40AM P8

Atlantic City BE-Admin

1809 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Groups, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Groups Erate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

Erate Eligible Design/Engineering Study

Qty.	Description	Price
1	Cost for Design and Engineering for the Installation of the eligible Erate Year 6 equipment and services.	\$ 25,000.00

1:11:10

FAX NO. :6107778545

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Atlantic City BE-Admin

1809 Pacific Avenue
Atlantic City, NJ 08401
(609) 343-7200



MICRO Technology Groupe, Inc.
311 A Rodgers Road
Bristol, PA 19007-3015

1/27/03

MICRO Technology Groupe Estate SPIN 143008940

All hardware or software will be purchased as listed or "newer"

PVBX Video Equipment

Note, This is a video solution for an elementary school (one school). We can customize solutions for larger school buildings.

All products listed below are estate eligible. The school will need to purchase non-eligible products such as TVs, VCRs, and cameras.

Qty.	Description	Unit Price	Total Price
1	32x32 PVBX Switch	\$ 39,500.00	\$ 39,500.00
25	Video Modulator Pair	\$ 200.00	\$ 5,000.00
25	Video Modulator Supply	\$ 300.00	\$ 7,500.00
1	Rack System	\$ 1,000.00	\$ 1,000.00
1	Agile Modulator	\$ 350.00	\$ 1,050.00
1	Back up LPH APC 2200 RMBH	\$ 964.00	\$ 964.00
25	Cat. 5e cable installation (if needed)	\$ 200.00	\$ 5,000.00
1	Complete installation of the PVBX System by Certified MTG Engineers	\$ 3,500.00	\$ 3,500.00

Maintenance Agreement

1	Maintenance Agreement for All Year 5 Estate eligible PVBX Video Products	\$ 5,000.00
48 Hours of On-site support will be provided with this Maintenance Agreement.		

Total	\$ 68,514.00
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Purchase Orders May be Sent to:
MICRO Technology Groupe

311 A Rodgers Road
Bristol, PA 19007

FAX: 377-329-9600

MICRO Technology Groupe Estate SPIN 143008940